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ABSTRACT

In 1980, the Office of Juvenile Justice and Delinquency Prevention released a program announcement for an alternative education demonstration program intended to test a variety of school-based delinquency prevention programs. Great emphasis was placed on project evaluations. One of the programs identified was PATHE - Positive Action Through Holistic Evaluation. Evaluation of PATHE interventions relies totally on records kept at the schools, including student-level interventions, school and community level interventions. Intensity and fidelity rating scales developed for the evaluation of PATHE implementation provided useful, reliable and valid data in a manageable form. The scores produced successfully compared levels of implementation of 21 different implementations in seven schools, and allowed for the testing of simple hypotheses regarding the correlates of successful implementation. Sample implementation rating forms, rating scales, and program development worksheets are appended. (JAC)

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EVALUATING THE IMPLEMENTATION OF A DELINQUENCY PREVENTION PROGRAM: THE PATHE EXPERIENCE

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In 1980, the Office of Juvenile Justice and Delinquency Prevention released a program announcement for an alternative education demonstration program. The program was intended to test a variety of school-based delinquency prevention models which would "impact upon the school climate, organizational structure, and educational process" and which would "ultimately be adopted by school systems" (p. 3). In both the body of the program announcement and a lengthy appended background paper, great emphasis was place on the importance of the thorough evaluation of funded projects. In a section delineating standards for evaluation, the documentation of program activities and of the duration and intensity of services was included with the comment that"without documentation of these program elements, outcome evaluation studies are relatively useless for policy making since they do not describe what generated observed results, making replication impossible" (p. 38).

The importance of describing program processes has been recognized in a number of evaluation models (Stake, 1967; Stufflebeam, et al., 1971; Provus, 1971). Morris and Fitz-Gibbon (1978) discriminate between summative and formative purposes for the evaluation of implementation. Program documentation serves the summative purposes of providing accountability data, describing the program under evaluation, and identifying possible causes of program effects. Formative purposes are served by program monitoring including the updating and revision of program plans (p. 15-22). As operationalized by the national evaluation team contracted by O.J.J.D.P. to evaluate the alternative education program,[1] both summative and formative purposes are served in the evaluation of implementation.

The purpose of this paper is to describe the evaluation of the implementation of PATHE - Positive Action Through Holistic Education - one of 18 projects

[1]The national evaluation team, headed by Drs. Gary and Denise Gottfredson, is based at the Center for the Social Organization of Schools at The Johns Hopkins University.

funded by O.J.J.D.P. Specifically, the process used to collect and analyze implementation data and some initial findings regarding the implementation of a juvenile justice delinquency program in the public schools will be discussed.

PROGRAM DESCRIPTION

Context and Staff

PATHE operates in seven Charleston County (S.C.) schools, four middle schools and three high schools. Three middle and two high schools are located in downtown Charleston and are almost 100 per cent black. One middle and one high school are located on John's Island and serve an integrated, rural population. At each of these schools, two full-time staff members - a Student Concerns Specialist (S.C.S.) and a Curriculum Specialist (C.S.) - are responsible for carrying out PATHE activities. At the central staff level, PATHE employs a consultant and an evaluator who manage and monitor program implementation. The Charleston County School District Federal Programs Director, author of the PATHE proposal for funding, has continued to be actively involved in the implementation of the program.

Goals and Interventions

As its name implies, PATHE is designed to impact upon the whole child and the whole school environment. Therefore, services are not limited to individual students; rather, PATHE also attempts to affect changes in the school which will improve conditions for the entire student body. Consequently, although many of PATHE's interventions are directed toward providing supplementary affective and academic services to students, others are intended to build faculty cohesion, to improve school climate, and to bring about organizational changes. The stated goals of PATHE are 1) to reduce the occurrence of delinquent acts and inappropriate behavior in and around PATHE schools, 2) to reduce unexcused absences and tardies, 3) to increase successful transition to the job force and post-secondary education, and 4) to reduce academic failure.

Through a process designed and facilitated by the national evaluation team, a Program Development Worksheet (P.D.W.) has been developed which describes the program's objectives and interventions in detail and links them to these goals. In addition, the strategies for implementing each intervention - including tasks, completion dates, and persons responsible - are outlined. The P.D.W. is updated twice a month and revised as necessary and provides a continuous history of intended program activities. It also documents progress made toward implementation and obstacles encountered.

Target student selection and treatment. A group of approximately 100 students at each school were selected to receive intensive services from the PATHE specialists. During the 1980-81 school year, target students were selected based on teacher referrals and school records before the evaluation had been designed. However, a more systematic selection process was implemented for the current school year. A pool of students in need of services was identified at each school using achievement test (C.T.B.S.) scores, attendance and suspension records, teacher and specialist referrals, and classroom grades. Members of the pool were randomly assigned to treatment (target) and control groups.

Most of PATHE's services are available to all students in the school. However, target students receive the following services not offered to others:

1) The specialists systematically collect information about target students and maintain a "Student Profile." Information collected includes detailed analysis of individual CTBS results, past classroom grades, attendance and suspension data, discipline referrals, and teacher comments.

2) These data are used to prepare problem statements and/or instructional needs assessments and to plan appropriate interventions for each student. Strategies include tutoring, counseling, peer counseling, leadership training, involvement in extracurricular activities, and self-improvement contracts.

3) Specialists conduct at least one counseling session per month with every target student for the purpose of monitoring progress and revising individual plans as needed.

4) An effort is made to link target students to all PATHE and school activities.

5) The parents of target students are periodically contacted by the specialists.

Classification of interventions. It has been the nature of the PATHE program to be extremely responsive to opportunities and needs which arise as the program progresses. For this reason, interventions have been deleted, added, and modified as necessary. Figure 1 presents a list and brief description of ongoing interventions classified as follows:

1) student-level: interventions which provide direct services to individual students;

2) school-level: interventions directed toward the expansion and improvement of existing school services and the introduction of new structures and organizations within the school; and

3) community-level: interventions which develop linkages between the school and community support systems.

Decisions to classify interventions using these categories are not always clear cut. For example, the tutoring program includes a strategy to involve tutors from institutions and agencies outside the school. However, since the central purpose of the strategy is to serve individual students, it is classified as a student-level rather than a community-level intervention. Similarly, the peer counseling program serves individual students but the thrust of PATHE activities related to the intervention has been to train a group of students to serve as counselors and set up a schedule for regular counseling to occur. Therefore, peer counseling has been classified as a school-level intervention.

Figure 1. Classification and definition of PATHE interventions.

	Student-Level Interventions
Tutoring	Tutoring is provided to students by the Curriculum Specialist, peer tutors, and tutors brought into the school from outside agencies. Students who receive tutoring may be self-referred or referred by teachers. In addition to tutoring provided outside of the classroom, the Curriculum Specialist may provide special materials and instructional plans to the students' classroom teachers.
Counseling	The Student Concerns Specialist provides counseling to students who are referred by teachers and administrators and who are absent, tardy, cut class, or are suspended. In addition, both PATHE specialists conduct regular counseling sessions with target students.
Study Skills	The Curriculum Specialist provides training to students in the form of mini-courses on study skills (e.g., note-taking, listening skills, good study habits).
Job-Seeking Skills	The Curriculum Specialist provides training in specific skills related to finding and keeping a job (e.g., interview etiquette) and offers opportunities to broaden career awareness.
Services to Target Students	Students identified as target (approximately 100 in each school) receive special services including diagnosis of achievement weaknesses and individual remediation plans, additional counseling, linkage to all PATHE and school activities, and regular monitoring of progress toward behavioral and academic goals.
	School-Level Interventions
Resource Room	The Curriculum Specialist sets up and monitors the use of a PATHE Resource Room. Resources include self-instructional activities, books and magazines for free reading, and other supplementary instructional materials. Both teachers and students are encouraged to use the resources provided.
Faculty Inservices	PATHE works with the teachers and principals to identify training needs at each school and to provide additional resources for faculty training, especially in areas relevant to PATHE's goals. Inservice topics have included classroom management, Student Team Learning, and faculty team building.
School Pride Campaign	With the cooperation of Parent and Student Leadership Team members, the Student Concerns Specialist plans and implements activities to improve school pride.
Curriculum Review and Revision	Achievement test results are used to diagnose school-wide academic weaknesses. The Curriculum Specialist, in cooperation with the Curriculum Support Team, uses the resulting information to plan and carry out remedial programs.
Field Trip Program	PATHE provides additional resources to the schools to assist with field trips which support PATHE's goals and objectives. PATHE staff members may conduct field trips themselves or assist other teachers.
Reading Experience Program	A period of time is set aside in the school schedule for free reading for everyone in the building. Teachers, custodians, and administrators as well as students are encouraged to participate and students are rewarded for active participation.

Exploratory Program	In the middle schools, PATHE works with the principal and the faculty to provide meaningful exploratory activities as mandated in the S.C. minimum required program.
Discipline Review and Revision	The Student Concerns Specialist reviews information about discipline problems in the school and plans and carries out activities designed to address these problems. Emphasis is placed on student involvement in the development of school and classroom rules and the establishment of a discipline referral procedure and the use of a standardized discipline referral form.
Peer Counseling	Students are selected and trained to conduct rap sessions with other students in the school. The purpose of peer counseling is not to provide personal counseling, but rather to conduct a forum on topics of special concern to students and to establish peer pressure to deal with problem areas in a socially acceptable way.
Expanded Extra-Curricular Activities	The Student Concerns Sepcialist encourages the growth of extracurricular activities on campus by assessing student needs, recruiting sponsors, and monitoring club progress.
Student Leadership Team	At each school a group of students is actively involved in planning ways to improve their school and in implementing their plans. These students also receive leadership training.
Student Concerns Support Team	Five faculty members at each school work with the Student Concerns Specialist to plan activities which will improve school climate and the behavior of individual students.
Curriculum Support Team	Another group of five faculty members works with the Curriculum Specialist to plan and implement activities designed to improve academic performance at the school.
	Community-Level Interventions
Career Exploration Programs	In cooperation with Trident Technical College, students at PATHE high schools participate in two programs designed to introduce them to careers in engineering and industrial technology. During the school year, students of both sexes attend six career awareness sessions at the college. During the summer, young women attend 24 sessions of the FACET (Female Access to Careers in Engineering Technology) program for which they receive two college credits.
Business Education Partnership	In cooperation with the school district's joint program with the Chamber of Commerce, PATHE works to establish an active, productive partnership for each of its schools with a business in the community. The primary purpose of these partnerships is to provide management and public relations expertise to schools.
Parent Leadership Team	Similar to the student teams, most PATHE parent groups plan ways to improve parental involvement in the schools. These teams also receive leadership training.

Figure 1. Classification and definition of PATHE interventions.

METHODS

Design Issues

Level of detail. PATHE is a large program, both in terms of the number of schools, students, and teachers served and of the number and complexity of interventions to be implemented. As Morris and Fitz-Gibbon (1978) point out, the appropriate level of detail for descriptions of program components is determined by the level of precision with which program developers have described the intended interventions. In the case of PATHE, the P.D.W. provides an extremely detailed blueprint for each intervention necessitating an equally detailed monitoring plan. The implementation for any single intervention varies from school to school and when differences in implementation between schools are considered across 21 interventions, the resulting flood of information can leave the evaluator floundering. The greatest challenge to the evaluator becomes to find a way to both describe the program at each site in adequate detail and to summarize implementation data in a useable, comprehensible, valid way.

According to Gephart (as cited by Reeves, 1979) when evaluating the implementation of a complex innovation (such as PATHE) it becomes very difficult to arrive at a single score which accurately portrays implementation. Gephart recommends the use of a profile of scores instead (p. 5.)

In the evaluation of PATHE an attempt has been made to offer the best of both detailed and summary information. Detailed descriptions of interventions as implemented at each school are prepared twice a year for use by program monitors and the national evaluators. These reports include a description of the intervention as planned, a number of indicators of implementation, a profile of implementation scores, and verbal descriptions of modifications and expansions of the intended intervention. In addition, a single implementation score for each intervention and for the whole PATHE program at each school is provided. These scores are generated using the rating scales described in detail below.

Level of participation. Rossi, Freeman, and Wright (1979) stress the importance of measuring the extent to which members of the target population actually participate in program activities (p. 123-126). Indeed, the intensity of PATHE services - the actual number of incidents of contact with students identified as target - has been a major concern of program managers. Students who receive PATHE services are not a captive audience. The specialists do not have a classroom of students to whom they can address their services nor are students systematically scheduled to attend PATHE activities as part of their normal school day. If services are in fact to be delivered, the specialist must be proactive in seeking out target students, scheduling them for services, and motivating them to attend. In order to adequately monitor the student-level interventions, data collection instruments have been developed to ensure that contacts with students are accurately recorded.

Data collection methods. Three methods of collecting implementation data are commonly suggested in the literature: use of existing or program-specific records, direct observation, and self-reports of program personnel or participants (Morris & Fitz-Gibbon, 1978, p. 51; Rossi, Freeman, & Wright, 1979, p. 126-144; Wolf, 1979, p. 83-88). PATHE program interventions in general - and especially those directed toward individual students - do not lend themselves to direct observation. It would be very difficult to observe a personal counseling session in an unobtrusive and yet ethical manner. Adequate sampling for the observation of less sensitive interventions (e.g., team meetings) at seven different sites would place an unrealistic burden on extremely limited evaluation resources. Consequently, the evaluation of PATHE interventions has relied almost totally on records kept in the schools, program manager records, and periodic interviews and other self-report measures administered to PATHE staff members and principals.

Data Collection

Student-level interventions. Daily Contact Logs and Activity Sign-ins are used by the specialists to record contacts with individual students and groups of students. In the development of these instruments, great care was taken to ensure that a minimum amount of time would be required to record each contact. More complicated procedures used during the 1980-81 school year resulted in incomplete and inaccurate records of student-level services, primarily because the specialists understandably preferred to devote their time to the students rather than to the completion of forms. Data collected on these forms include the nature or purpose and duration in minutes of each contact and the presence of other persons (e.g., teachers, parents, administrators).

School district suspension, expulsion, and dropout data are also collected as well as discipline referral forms. Information from suspension reports, Daily Contact Logs, and Activity Sign-ins are entered on local computer files from which summary reports are prepared for use in monitoring the delivery of services. Furthermore, Student Data Sheets are produced which compile all data collected for each target student. These reports are distributed to the specialists and added to school files as a case history of each student's contact with the program. Discipline referral forms are sent to the national evaluation team for analysis and the resulting reports are shared with the program staff on a regular basis.

Student Profiles are maintained in the schools which include records of parent contacts, individual instructional plans, and behavioral problem statements for each target student. The status of the files - what plans are on file and the quality of these plans - is periodically checked as an indicator of the quality of services being provided target students.

School-level interventions. Faculty Contact Logs, similar to the Daily Contact Log used with students, are maintained by the specialists as a record of their

contacts with individual teachers. Activity Sign-ins are also used with groups of teachers such as the support teams. Resource room sign-out records are maintained and turned in on a monthly basis as a form of documentation of the use of PATHE materials. Specialists also submit action plans, agendas, and minutes from meetings conducted at their schools (e.g., Student Leadership Team meetings).

Once a month, the evaluator reviews the P.D.W. and compiles a task calendar which is distributed to the staff members. Specialists use the calendars to plan their daily activities, indicate completion dates of tasks assigned, describe problems or successes related to each task on their copy, and return the calendar at the end of the month. The completed calendars serve as a means of communication between the specialists and the program consultant who can use them to plan her monitoring visits. They are also kept on file as one form of self-report implementation data.

Occasionally specialists are also assigned the task of completing an Activity Report, describing the implementation status of a specific intervention at their school.

Community-level interventions. Activity sign-ins, plans, minutes, agendas, activity reports, and monthly calendar task assignments are also used to collect data about community-level interventions. In addition, in cases where a program is managed primarily by the PATHE program consultant or when data are collected away from the schools, special forms are developed, used, and collected. For example, instructors at Trident Technical College collected attendance data for PATHE students participating in their Career Exploration program.

Data Analysis

Implementation reports. Twice a year - at the end of the first semester and in the late spring - implementation reports are prepared for each school. The report consists of a separate form for each intervention. A description of the intended intervention taken from the P.D.W. is presented on one side of the form

with space available on the other side for a description of what has actually taken place at the school. All information relevant to the intervention at a single school is compiled and presented on the form including summaries of team plans, frequencies of student contacts for a specific purpose, and other evidence as to whether or not the intervention has been implemented and to what degree. A draft report is prepared and used as a guide for school-by-school staff interviews conducted by the program consultant and/or the evaluator. The purpose of the interviews is to verify the accuracy of the information on the report, collect additional information where data on file do not adequately portray programs at the school, identify problem areas, and develop strategies to improve the program. After the interview, the reports are revised and updated as necessary. (Appendix A presents documents which follow the monitoring of one intervention from the P.D.W. strategy description, to the monthly calendar, to a completed implementation report for one school.)

Rating scales. Three rating scales - of fidelity, intensity, and duration - have been developed for use in reducing the large quantities of data collected to numerical measures of implementation. In addition a scale has been developed to rate principal support of each intervention and another to rate the level of central staff monitoring of intervention implementation.

Fullan and Pomfret (1975, 1977) in their review of implementation studies identified a "fidelity" approach to the measurement of implementation. Fidelity can be defined as the degree to which a program as implemented corresponds to the expectatations of the program developer. Morris and Fitz-Gibbon (1978) suggest that such an index can be particularly useful if there is a detailed program plan from which to draw the intended characteristics of the intervention (p. 75). The P.D.W. makes the delineation of the critical characteristics of each PATHE intervention a relatively simple task.

Typically, PATHE interventions describe a series of tasks or a process

which is to be carried out at each school. For example, the Student Leadership Teams are expected to develop a plan of action to improve school climate. The plans may be quite different in each school but a plan should exist. The tasks or activities identified in the P.D.W. and listed on the implementation report described above are also listed on the fidelity rating instrument as standards. (See Appendix B for copies of fidelity and intensity scales). By referring to the evidence of implementation reported on the implementation report, the rater can fairly easily check off those tasks which have in fact been carried out. Once the checklist is completed, the following scale is used to rate implementation: 4=exceeds standards; 3=meets standards completely or with approved adaptation, 2=meets 50-99% of standards, 1=meets 1-49% of standards, 0=does not meet standards/not implemented.

The intensity scale also describes program manager expectations or standards for the number of persons served or activities conducted for each intervention. Again, the information necessary to assess to what degree the standards have been met at a school is available on the implementation report. The following five-point intensity scale is used to assign ratings: 4=exceeds standard by more than 5%, 3=meets standard $\pm$ 5%, 2=meets 50-95% of standard, 1=meets 5-49% of standard, 0=meets 4% or less of standard.

The duration scale simply asks the rater to code the date of initiation of the intervention using numbers compatible with the fidelity and intensity ratings as follows: 4=in operation August-September, 1981, 3=began in October, 2=began in November, 1=began in December/January, 0=had not begun by end of January. December and January are collapsed into one rating on this scale because of the Christmas holidays which effectively cut program time in half during those months.

Reliability coefficients for each subscale were calculated using a Cronbach (When ratings are used to produce a school-level rating across all

21 interventions, the fidelity scale was found to have a reliability coefficient of .67, the intensity scale a coefficient of .79, and the duration scale a coefficient of .29. Due to the lack of internal consistency demonstrated by the duration scale, resulting data were not used in further analyses. An Implementation Scale which combines the fidelity and intensity ratings demonstrates adequate internal consistency with a reliability coefficient of .80.

In contrast, when fidelity and intensity ratings are used to produce an implementation score for each intervention across schools, the internal consistency of the scales drops to .16. Since only seven schools are involved in the program, this drop in reliability is not surprising. Furthermore, since we would expect the level of implementation on each intervention to vary, often dramatically, from school to school, the internal consistency of the scale when used to rate interventions is understandably low. To date only one rater - the program evaluator - has been involved in the use of the scales. In the future, it may be possible to use multiple raters and establish inter-rater reliability for intervention ratings. However, the logistical difficulty of finding several people willing to spend the time necessary to rate all interventions on two scales for seven schools makes it unlikely that an opportunity to assess inter-rater reliability will arise. Furthermore, the standards on the rating scales will be different every time the scales are used since the program will have progressed through another half year of implementation and expectations will have changed accordingly. Consequently, the cost effectiveness of establishing inter-rater reliability for one iteration of the scale is questionable.

Morris and Fitz-Gibbon (1978), recognizing the problem of establishing reliability for implementation measures suggest that evaluators focus on demonstrating the validity of their instruments (p. 135). They describe concern for validity of implementation measures in terms of a four-part question: "Is the description of the program which the instrument presents accurate,

relevant, representative, and complete?" The instruments developed to measure the implementation of PATHE meet all four requirements. The fact that ratings are based on specific standards taken directly from the Program Development Worksheet - a document prepared by program developers - is evidence that the scales are relevant, representative, and complete. Since the rating process requires the rater to review data collected from multiple sources and compare the evidence of implementation to an objective standard, the accuracy or absence of bias of ratings is established. Furthermore, the presentation of all ratings, evidence of implementation, and standards on the implementation reports makes the derivation of the ratings a process open to public review and challenge.

The principal support rating scale is not as easily defended, primarily because evidence of principal support is often not as clear-cut as indicators of program implementation. Principals were rated on their support of each intervention by the evaluator and two program managers using the following scale: 4=principal has done something to support the intervention and gives enthusiastic verbal support, 3=the principal expresses enthusiastic verbal support not contradicted by actions, 2=the principal supports moderately, with some reservations or concerns, 1=the principal neither supports nor obstructs implementation, 0=the principal obstructs implementation.

Each rater completed the scale independently. The evaluator used principal interview responses concerning each intervention and evidence on the implementation reports to assign ratings. For example, in several schools the specialists reported that their principals had conducted a faculty meeting about grading practices using information collected by PATHE. These reports were considered evidence that principals had done something in support of the Curriculum Review and Revision intervention resulting in a principal support rating of 4. The other two raters drew on their own experiences in implementing the program to rate principal

support.

Once all ratings were completed, the evaluator compared the ratings and made a final decision on the score for each intervention. It was felt that a mean score would be inappropriate since each rater was operating out of a separate set of experiences. Rather, a set of decision guidelines were used to determine each rating. If one rater had assigned a score of 4 to an intervention and both of the other raters had assigned 3's, the evaluator assumed that the person giving a 4 rating had information or evidence that the principal had done something to support the intervention which was unavailable to the other two raters. Similarly, if one rater had given a rating of 0 and both other ratings were low, the evaluator assumed that the rating of 0 was based on information about principal obstruction of an intervention which the other raters did not possess. For ratings in the 1 to 3 range, either a mid-score or the score given by two of the raters was used. When principal support scores for all interventions at each school were calculated using the resulting ratings, the internal consistency of the support rating scale using Cronbach α was .86.

A final scale was developed to rate the level of central staff monitoring and involvement in the implementation of each intervention. In developing the scale, two types of evidence of monitoring and involvement were considered. First, a review of monthly calendars was conducted to determine how many times during the school year the specialists had been required to turn in a document of some kind (e.g., a plan, a report, data) for each intervention. When turn-ins are required those who fail to respond are periodically reminded of the deficiency until it is corrected, resulting in extensive monitoring. Activities for which no turn-in are required are left to the conscientiousness of the specialist and less systematic monitoring by central staff personnel. It was found that the number of turn-ins ranged from zero to eleven per intervention with a mode of 3, a mean of 4, and a standard deviation of 2.7.

A second consideration in rating monitoring was whether or not activities had been conducted or action taken from the central staff level to facilitate intervention implementation.For example, at the first of the school year, the program monitor visited each principal to persuade him to use a new discipline referral form developed for PATHE. In the case of another intervention, a project-wide conference was conducted for members of the Student Concerns and Curriculum Support Teams to help team members develop action plans for the year. The following scale was used to rate the degree of monitoring: 4=centrally organized activity and 3 or more turn-ins required on calendar, 3=centrally organized activity or 6 or more turn-ins required on calendar, 2=1-5 turn-ins required on calendar, 1=no turn-ins required.

RESULTS

Implementation Scores

Average scores were calculated on both the fidelity and intensity scales for each school and each intervention. On the fidelity scale, school scores ranged from 1.85 to 2.95 and intervention scores ranged from 1 (Job-seeking Skills) to 3.28 (Curriculum Review and Revision). The mean score for all schools and all interventions was 2.29 with a standard deviation of 1.069.

On the intensity scale, school scores ranged from 1.85 to 3.6 and intervention scores ranged form 1.14 (Services to Target Students and Business Education Partnership) to 4 (Student Leadership Team). The mean intensity score for all schools and all interventions was 2.34 with a standard deviation of 1.467. It should be remembered in interpreting intensity scores that the rating process compared the number of students served to a standard for the intervention and the resulting scores do not represent absolute numbers of students served. Therefore, it may be that, even though the intensity rating is lower for Services to Target Students, there have been more contacts with target students than with members of Student Leadership Teams.

Using combined fidelity and intensity ratings, the student-level interventions as a group had a mean implemntation score of 1.87 (standard deviation=1.297), the school-level interventions had a score of 2.522 (standard deviation=1.205), and the community-level interventions had a score of 2.176 (standard deviation=1.405). These ratings indicate that the program managers' concern that services to individual students are not being implemented as intended is indeed warranted. Perhaps of even greater concern is the fact that the intervention Services to Target Students received a mean fidelity rating of 1.28 (standard deviation=.487) and a mean intensity rating of 1.14 (standard deviation=.390). If a rating of 3 is interpreted as an indicator of full implementation as described in the P.D.W., the student-level interventions as a group and the Services to Target Students intervention fall well below the standard. On the bright side, the following interventions received mean scores of 2.5 or above: Study Skills, Resource Room, School Pride Campaign, Curriculum Review and Revision, Student Leadership Team, Curriculum Support Team, Career Exploration Program, and Parent Leadership Team.

Mean principal support scores for school ranged form 2.4 to 3.7 while support scores for interventions ranged from 1.42 (Job-Seeking Skills) to 4 (Student Leadership Teams). The average rating across all schools and interventions was 2.94 with a standard deviation of 1.001.

Lipham (1977) reports that "it is likely that no major program of educational improvement can succeed without the understanding, support, and involvement of the administrator of the local school" (p. 119) and Berman and McLaughlin (1977) found that "if the innovation is complex the blessing of the principal and active support are even more important" (p. 128). When principal support ratings were correlated with implementation scores for each intervention, a Pearson correlation coefficient of .66 was obtained (r^2=.43). While it is not possible to conclude based on these data that principal support of an intervention causes it to be

more fully implemented, principal support may well be a critical facilitating element if not an essential precondition to complete implementation.

Monitoring scores were also correlated with implementation scores for each intervention and found to yield a coefficient of.54 (r^2=.29). Although this relationship is weaker than that between principal support and implementation, it is still of sufficient strength to be useful in understanding differences in implementation. Especially in a program such as PATHE which requires so much of staff members, there is a natural tendancy to do first the tasks which are being most closely observed by supervisors or for which a concrete product must be produced. It is particularly interesting to note that the two interventions which received the lowest monitoring scores - Job-seeking Skills and Services to Target Students - also received the lowest implementation ratings. The Job-seeking Skills intervention has never been a high priority for central staff members and the ratings it received are to be expected. However, Services to Target Students have been stressed repeatedly in staff meetings. Unfortunately, the forms used to document services to target students (e.g., problem statements, records of parent contacts, instructional plans - are not turned in but are kept at the school in the Student Profiles.

DISCUSSION

Rating Scales

The intensity and fidelity rating scales developed for the evaluation of PATHE implementation have provided useful, reliable, and valid data in a manageable form. The scores produced using the rating scales were successfully used to compare levels of implementation of 21 different interventions in seven schools and also allow the testing of simple hypotheses regarding the correlates of successful implementation.

An assumption upon which the scales are based and which might be questioned is that the multiple standards specified for each intervention on the fidelity scale are of equal importance and that fidelity and intensity ratings are also

equally important indicators of implementation. If an argument can be successfully made that this assumption is false, it may be necessary to weight ratings of components judged more important.

Another underlying premise on which this entire data collection effort has been based is that program personnel and the evaluator interact in a trusting relationship. Fortunately for this evaluator, the two people most directly responsible for the implementation of PATHE are enthusiastic and informed consumers of evaluation results who see the program development process as an asset and rely on both the local and the national evaluators for information which will help them improve their program. It is truly difficult to imagine how the detailed data required to produce the implementation reports on which the rating scales are based could possibly be collected without the unreserved support of program staff members.

The rating scales were developed for use in the formative evaluation of PATHE. For better or for worse, circumstances now exist which will probably lead to the summative use of fidelity and intensity scores. Cut backs in O.J.J.D.P.'s funding will trickle down to PATHE and program managers are currently trying to decide which of the seven PATHE schools will not continue in the program next year. Since outcome data will not be available in time to inform this decision, implementation data will be used to select PATHE schools for 1982-83. The systematic collection and reporting of implementation data which has characterized the evaluation of PATHE will allow program managers to feel confident that their decisions are as fair as possible.

Implementation of PATHE

Berman and McLaughlin (1977) hypothesized that "complex and ambitious innovations are more likely to elicit the enthusiasm of teachers than routine projects" (p. 82). PATHE certainly qualifies as a complex and ambitious innovation and it has elicited enthusiasm on the part of teachers, principals, students, and staff members. It has also elicited frustration, exhaustion, and some very good humor.

PATHE is now approaching the end of its second year of implementation. Some of its interventions are doing very well. While we still do not know what impact each intervention is having on student outcomes, we at least know that many of PATHE's intended activities are in fact taking place and have received the support of the principals involved. However, other interventions are still marginally implemented. As PATHE's managers decide whether or not to continue the program in weak schools, they might also consider whether or not to continue weak interventions. Three factors should be included in such a decision. First of all, a judgement should be made as to the criticality of the intervention to the goals of PATHE and the theory which supports its program plan. Next, a review of related interventions should be made to determine if another, more successful intervention addresses the same goal. Finally it would be wise to check principal support for the intervention at each school. Using these criteria, the Job-seeking Skills intervention would probably be dropped from PATHE during the next school year. While it is directly related to the program goal of improving student transition to the work force, the Career Exploration Program at Trident Technical College is a more successful intervention related to the same goal. Furthermore, the Job-seeking Skills intervention does not enjoy a high level of principal support. In contrast, the Services to Target Students Intervention is strongly supported by five of the seven principals and is the only intervention which attempts to provide intensive treatment to students identified as exhibiting patterns of behavior which are correlated with delinquency. It may be time to transfer some of the energy previously focused on interventions which are now successfully in place to the development of an intensive monitoring strategy for services to target students.

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APPENDIX A

Intervention Monitoring Documents

Sample Program Development Worksheet Strategy Description

Counseling Intervention

Strategies and Tasks	Critical Benchmarks	Who will do what by when?
3.3 SCS Counseling		
-develop plan for presenting rap sessions (topics, schedule, participants)		
-obtain principal approval	At least 3 rap sessions per school are held	SCS, 11/15 and ongoing
-implement and monitor		
-establish a mechanism that will allow SCS to intervene early in nonattendance/truancy cases	Principal agrees to procedure which sends tardy and truancy cases to SCS before the point of suspension	Program coordinator, SCS, and school personnel, 9/18
- establish a schedule that includes tracking attendance, counseling returning suspended students, and providing information to school administrators	SCS records indicate that counseling sessions were held with all students identified	Program coordinator, SCS, 9/18
- counseling results to referring teachers via referral form		SCS, ongoing
- follow-up counseled students (teacher contacts, self-imrovement contracts, parent contacts	SCS records indicate follow-up contacts with students, teachers, and parents	SCS, ongoing

MONTHLY PLANNING CALENDAR FOR November, 1981

Name: _____ School: _____

Activity	Information/ Documents to be turned in	Expected Completion Date	Actual Completion Date	Comments
Conduct regular meetings of Student Leadership Team, Parent Leadership Team, SCST.	sign-ins, agendas minutes	12/10		
Conduct peer counselor training and/or sessions	sign-ins, training evaluation surveys	12/10		
Submit PATHE Activity reports for School pride campaign Open house Parental involvement	Reports for each activity listed	12/ 10		
*** Maintain discipline referral forms	completed forms	12/10		Collect completed forms in person from principal, vice principal, guidance counselors at least once a week. Be sure teachers and administrators have sufficient copies of forms.
*** Collect suspension information	copy of school report for November	12/10		
*** Plan to conduct RAP sessions	plan	12/10		RAP sessions should include an effort to modify students' antisocial beliefs as identified by the student questionnaire. Other topics might include student victimization and gangs at school.
*** Conduct first RAP session	sign-ins	12/10		

*** Tasks related to Counseling intervention.

PATHE SCHOOL IMPLEMENTATION REPORT

RATINGS
fidelity 2
intensity 3
duration 4
support 4
3.25

School Burke High School

Intervention Counseling

Intended Activities	Status and/or Date Initiated	Description of Implemented Activities
Develop plan for presenting rap sessions to students. Obtain principal approval.	9/91	# contacts for counseling= 311 # contacts for RAP sessions= 25 % students suspended who had contact with PATHE= 69% # parent contacts= 26 # self improvement contracts= 0
Implement and monitor.	yes	
Establish a mechanism that will allow the S.C.S. to intervene early in nonattendance/truancy cases, track attendance problems, and counsel returning suspended students.	yes	"Rap with Risher" - Student Concerns Support Team member conducts sessions. Also Student Leadership Team members conduct rap sessions at Burke and at Rivers Middle School.
Report results of counseling to referring teachers via discipline referral form.	yes	
Make parent contacts as needed.	yes	
Use self improvement contract as needed.	no	

APPENDIX B
Rating Scales

Fidelity Scale

The rater compares implemented activities and tasks as documented on the Implementation Report to the standards for implementation described on this and subsequent pages. After checking off which of the standards have been met, a rating is assigned to each intervention using the following scale:

4=exceeds standards

3=meets standards completely or with approved adaptation

2=meets 50-99% of standards

1=meets 1-49% of standards

0=does not meet standards/not implemented

Intervention	Standards
Tutoring	-outside tutors involved -regular schedule of tutoring contacts by C.S. -target students included
Counseling	-RAP sessions plan on file -evidence of RAP sessions -evidence of at least 10 parent contacts -contact with at least 90% of students suspended -system established to monitor attendance problems -target students included in counseling
Study skills	-plan on file -evidence of implementation
Job seeking skills	-distribution of materials -presentations to groups on job seeking skills or career awareness
Services to target students	-individualized instructional plan/needs assessment or problem statement for every target student -letter sent to parents -positive parent contact for every target student -at least one contact with each target student

Intervention	Standards
Resource room	-needs assessment memo used after each grading period -resource room open house conducted -evidence of teacher use
Faculty inservices	-particpation in team building conference -teacher participation in Student Team Learning training -inservice plan on file which addresses identified needs -evidence of implementation of plan
School pride campaign	-plan on file for whole year -evidence of implementation
Curriculum review and revision	-CTBS analysis on file -plan to improve identified weaknesses on file -evidence of meetings with teachers re plans and weaknesses -failure data collected and used to identify students and teachers who need help -help provided identified teachers and students -mini-tests in use -instructional materials and teaching strategies distributed -assistance in use of curriculum guides

Intervention	Standards
Field trips	-plan on file -one trip for each of three areas (career, academic, cultural) -scheduled throughout the year
Reading Experience Program	-plan for school-wide program on file -evidence of implementation -motivational activities planned and implemented
Exploratory program	-schedule on file -display of exploratory products in school -schedule implemented
Discipline policy review and revision	-school and classroom rules developed by teachers and students and posted -referral procedures and discipline referral form approved by principal -referral procedure implemented so that includes S.C.S. -assitance given to teachers with classroom management problems (at least 10)

Intervention	Standards
Peer counseling	-counselors trained -plan on file -counseling services provided on regular schedule
Extracurricular activities	High School: -club plans or charters on file -club mid-year activity reports on file Middle School: -clubs begun last year continue
Student Leadership Team	-meetings held regularly -satisfactory team plan on file -evidence of plan implementation -central leadership conference attended
Student Concerns Support Team	-regular meetings held -contracts on file -satisfactory team plan on file -evidence of plan implementation
Curriculum Support Team	-regular meetings held -contracts on file -satisfactory team plan on file -evidence of plan implementation

Intervention	Standards
Career exploration program	-students recruited to attend Trident Technical College fall program -follow-up meeting with students held
Business Education Partnership	-team formed with school and buisness members -PATHE specialist included on team -plan developed to improve school management -implementation of plan evident
Parent Leadership Team	-regular meetings held -satisfactory team plans on file -evidence of implementation of plans -leadership training attended

Intensity Rating Scale

The rater compares intensity of program services as documented on the Implementation Report to the standards given below and rates each intervention using the following scale:

4=exceeds standard by more than 5%
3=meets standard ± 5%
2=meets 50-95% of standard
1=meets 5-49% of standard
0=meets 4% or less of standard

Intervention	Intensity Standard
Tutoring	200 incidents of tutoring
Counseling	300 indidents of counseling
Study skills	50 incidents of participation
Job seeking skills	1 all school activity or 50 incidents participation
Services to target students	3 contacts with every target student
Resource room and services to teachers	# teacher checkouts= # teachers
Faculty inservices	1 school level, 5 teachers attend S.T.L., and 5 attend team building
School pride campaign	3 all school activities
Curriculum review and revision	incidents C. S. faculty contact = 2 x # teachers
Field trip program	1 field trip conducted
Reading Experience Program	entire school, monthly, for more than 15 minutes

Intervention	Intensity Standard
Exploratory program	entire school, weekly
Discipline policy review and revision	# discipline referral forms =# suspensions + ½ # suspensions
Peer counseling	70 incidents contact related to peer counseling
Extracurricular activities	H.S. - 10 club plans M.S. - 100 incidents contact
Student Leadership Team	30 incidents attendance
Student Concerns Support Team	20 incidents attendance
Curriculum Support Team	20 incidents attendance
Career exploration programs (T.T.C.)	60 incidents attendance
Business Education Partnership	3 meetings
Parent Leadership Team	20 incidents attendance